Claims

What is claimed is:

Show1. A building panel, comprising:

(a) a curved central portion;

3 (b) a pair of side wall portions extending from

opposite ends of said curved central portion; and

(c) a pair of complementary wing portions extending from said side wall portions.

2. The building panel of Claim 1, wherein said curved

central portion has a concave shape from a perspective

 $_3$ between said side/wall portions.

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3. The building/panel of Claim 1, wherein said curved

2 central portion resembles an arc.

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1 4. The build ing panel of Claim 3, wherein said arc ranges

2 from 15° to 130°.

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5. The building panel of Claim 3, wherein said arc ranges

2 from 40% to 130°.

6. The building panel of Claim 5, wherein said arc ranges from 60° to 120°.

7. The building panel of Claim 6, wherein said arc is 85°.

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8. The building panel of Claim 3, wherein said arc has a radius ranging from 4 inches to 25 inches.

9. The building pane of Claim 3, wherein said arc has a radius ranging from 4 inches to 12 inches.

10. The building panel of Claim 9, wherein said radius ranges from 5 inches to 8 inches.

11. The building panel of Claim 9, wherein said radius is 6 inches.

1 12. The building panel of Claim 1, wherein said side wall

2 portions extend at an incline from opposite ends of said

3 curved cent/ral portion.

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1	13. The building panel of Claim/1, wherein said side wall
2	portions extend tangentially from opposite ends of said
3	curved central portion.

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14. The building panel of claim 1, wherein one of said wing portions comprises a hook portion and the other of said wing portions comprises a hem portion.

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15. A building structure, comprising a plurality of interconnected panels, each of said panels comprising:

(a) a curved central portion;

(b) a pair of side wall portions extending from opposite ends of said curved central portion; and

(c) a pair of wing portions extending from said side wall portions, wherein one wing portion extends from a first of said side wall portions and the other wing portion extends from a second of said side wall portions, wherein said one wing portion from a first of said panels is connected to said other wing portion from a second of said panels.

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- 1 16. The building structure of Claim 15, wherein said
- curved central portion has a con¢ave shape from a
- perspective between said side wall portions.

1 17. The building structure of Claim 15, wherein said curved central portion resembles an arc.

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- 1 18. The building structure of Claim 17, wherein said arc
- ranges from 15° to 130°.

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- 1 19. The building panel of Claim 17, wherein said arc has a
- $_2$ radius ranging from $_4$ inches to 25 inches.
- 20. The building structure of Claim 15, wherein said one
- wing portion comprises a hook portion and said other wing
- portion comprises a complementary hem portion such that
- said hook and hem portions interconnect.

1	21. A panel crimping machine for crimping a panel having a
2	curved central portion, comprising:
	(1) a main of maintains well-ample offset from one
3	(a) a pair of crimping rollers offset from one
4.	another and located within said panel crimping machine
5	such that when a panel enters said panel crimping
6	machine the curved central portion of the panel passes
7	between said crimping rolfers, said pair of crimping
8	rollers comprising:
9	(i) a male crimping roller comprising
10	(A) a hub, and
11	(B) a plura ity of male crimping blades
12	extending radially from said hub, each of
13	said male crimping blades having a concave
14	profile, and
15	(ii) a female crimping roller comprising
16	(A) a hub, and
17	(B) a plurality of female crimping blades
18	extending radially from said hub, each of
19	said female crimping blades having a convex
20	profile complimentary to said concave
21	profile of said male crimping blades; and
22	(b) means for driving said pair of crimping rollers
23	such that said crimping rollers rotate, thereby

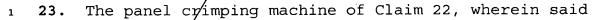
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causing said male crimping blades and said female

crimping blades to alternately intersect and crimp the curved central portion of the panel.

- 1 22. The panel crimping machine of Claim 21, wherein said
- means for driving said pair of crimping rollers includes a
- motor and a mechanical drive train that connects said motor
- 4 to said crimping rollers.



- mechanical drive train drives one of said crimping rollers
- and allows the other of said crimping rollers to idle.
- 24. The panel crimping machine of Claim 22, wherein said
- 2 mechanical drive train drives both of said crimping
- 3 rollers.

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- 25. The panel crimping machine of Claim 21, wherein said drive trains comprises:
- (a) a first shaft extending through said male crimping roller;
- (b) a second shaft extending through said female crimping roller;
 - (c) a first gear mount on said first shaft;
 - (d) a second gear mounted on said second shaft, said second gear engaging said first gear;
 - (e) an idler sprocket engaging said second sprocket; and
 - (f) a motor connected to and driving said idler gear, which in turn rotates said first and second gears, thereby rotating said male and female crimping rollers.
- 1 26. The panel crimping machine of Claim 25, further
- 2 comprising a clutth located between said motor and said
- 3 idler sprocket.
- 1 27. The panel crimping machine of Claim 26, wherein said
- 2 clutch is a reversing clutch.